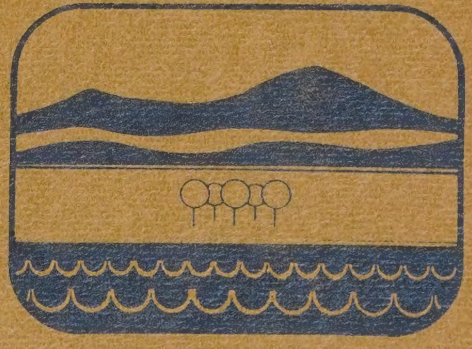
# TRANSPORTATION & CIRCULATION ELEMENT





FAIRFIELD GENERAL PLAN

# TRANSPORTATION and CIRCULATION ELEMENT FOR THE GENERAL PLAN OF THE CITY OF FAIRFIELD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Adopted by Resolution 79-11 of the

Fairfield Planning Commission on October 24, 1979

Adopted by Resolution 79-207 of the

Fairfield City Council on December 4, 1979

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# SUMMARY OF MAJOR FEATURES

The Transportation and Circulation Element is divided into four principal sections that describe the existing system, proposals for an improved system, alternatives to the present system and conclusions and policies. Together these sections set forth a comprehensive description of the past, present, and proposed transportation and circulation system for Fairfield.

## THE EXISTING SYSTEM

Unlike many small California communities commencing existence during the last century, Fairfield was able to rely on water and rail facilities as well as a local system of roads to move goods and people. The local evolution of these systems has had, in turn, a major impact in determining Fairfield's present physical and economic form in relation to the metropolitan areas of Sacramento and the San Francisco Bay Area.

In addition to providing a description of Fairfield's early transportation and circulation system the element describes the current regional and local systems. It is noted, for example, that major freeways and highways, railroads, bus and trucking companies, air and even waterways serve to link Fairfield with the region, state and nation both in the movement of passengers and of freight.

At the local level the section describes the transportation system within the City including the road system and its current deficiencies. It is noted, for example, that local street capacities are currently adequate but that the City lacks proper east-west traffic circulation facilities. The concluding part of this section is devoted to describing the City's public transit system. This includes an accounting of the City's recently instituted six vehicle demand responsive system and the City's privately operated fixed route bus system.

# TRANSPORTATION AND CIRCULATION PROPOSALS

In this section the future needs of Fairfield's transportation and circulation system are set forth in a number of categories including highways, transportation corridors, airports, rail and water facilities, bike routes, pedestrian movement, and the local road system. The section concludes with a discussion of local priorities.

## FUTURE HIGHWAY NEEDS

It is noted that by the year 2000 and, in some instances as early as 1985, motorists will experience substantial delays on local arterials if improvements are not made to the system. Delays of this nature would result in a shifting of traffic to collector and minor residential streets. It is also pointed out that as local development continues to occur, the deficiencies of intersections along Highway I-80 will become even more apparent than they are currently and that by the year 2000 traffic volumes will exceed the current design capacity of I-80.

To meet these needs the section devotes a number of pages to describing improvements that can be made to regional road, rail, water and airport systems and to the local road system.

## REGIONAL TRANSPORTATION FACILITIES

Priority is given, for example, to the long awaited relocation of Highway 12 clear of Fairfield's central business district. This improvement would be a two lane expressway from I-80 to the existing Rio Vista Road east of downtown Suisun City with a six lane railroad overpass provided at Union Avenue.

To lessen future congestion on Highway I-80 between the Fairfield and Cordelia urban growth centers, recommendations are made for parallel local road systems and the introduction of public transit between the centers.

In addition the Element discusses the progress made to date and the future feasibility of establishing high-speed mass transit through the area and the development of a regional commercial airport facility at Travis Air Force Base.

## PLANNING AREA ROAD SYSTEM

Here recommendations are made concerning the improvement of more than 20 local arterials in the planning area to relieve anticipated traffic congestion. In almost all cases it is proposed that existing local two lane arterials be widened in the future to four lanes. The construction of new arterials is also recommended with major emphasis placed on the City maintaining an option to construct a new east-west road between North Texas Street and Pennsylvania Avenue.

A new street pattern is discussed for the revitalization of Fairfield's central business district to compliment a mall proposed for the area and to connect the downtown to a relocated Highway 12. In addition, the Element recommends that virtually every freeway interchange in the City be improved to accommodate increased traffic.

## PRIORITIES

As the Element notes, the City is currently attaching high priority to the construction of a relocated Highway 12 and the improvement of interchanges at Highway I-80 with Travis Boulevard, Air Base Parkway and West Texas Street. The Element also places a high priority on the continued improvement of eastwest traffic circulation in the City through the reconstruction of intersections and widening of existing arterial streets.

At the conclusion of this section note is made that the City has not established a specific list of priorities for the planning area roadway system. This is due in part to City policy of delaying many road improvements until new development requires them. While the cost of such improvements will largely be borne by private developers, the City must still budget capital from other revenue sources for circulation systems that will keep pace with new growth patterns in the City.

To enable the City to better evaluate the needs and regulate the phasing of new development, the Element recommends that the City establish priorities of improvement to its circulation system.

# ALTERNATIVES TO PRESENT SYSTEM

This section is devoted to five broad areas of concern; coping with the automobile, the needs of the pedestrian, the bicycle trail system, altering trip making behavior, and the financing of alternative systems.

## COPING WITH THE AUTOMOBILE

Assuming that the automobile will remain with us for some time, the Element makes proposals in a number of areas for making its continued presence more bearable. Street appearances can be improved, for example, by the elimination of roadside signs and the designation of scenic roads. New street standards can be developed that not only cost less to construct, but result as well in energy savings to adjacent property owners.

Public transit is seen to not only provide for persons who lack convenient access to the automobile, but also to provide a means of lessening the amounts of air pollution now caused by privately operated motor vehicles. The Element provides a description of the City's existing demand response transit system and a summary of proposals made in the City's newly adopted Transit Development Program for improving local transit facilities during the coming years.

## MEETING THE NEED OF THE PEDESTRIAN

To offset many of the worst features associated with the automobile, such as its noise and pollution and to make walking more attractive, the Element makes proposals for encouraging pedestrian circulation. These improvements include the design of better pedestrian facilities, and the improvement of pedestrian circulation patterns in areas such as Fairfield's central business district.

## THE BICYCLE TRAIL SYSTEM

There are over 7,000 bicycles registered in Fairfield and probably an even greater number as yet unregistered. The Element, in this section, provides a description of the City's draft Bikeway Plan formed to encourage the bicycle as a safe, convenient and pleasant alternative to the automobile. The Bikeway Plan provides a phased program for the development of bike routes throughout the community. A strong recommendation of the Element is that the draft Fairfield Bikeway Plan be adopted as a part of the Transportation and Circulation Element of the General Plan.

## ALTERING TRIP MAKING BEHAVIOR

The annual costs of operating and maintaining an automobile run to the thousands of dollars for the average car owner. In this part of the Element, programs are described that would encourage alternatives to automobile use. On a regional level such programs would run from increased auto tolls on bridges and car and van pool strategies to more extensive bicycle systems. At a local level such programs would run from new parking strategies to reimbursable cost of transit to shoppers and employees.

## FINANCING ALTERNATIVES

The Element notes that while little money has been spent until recently on local transportation modes other than the automobile, there are several alternative sources available for financing City owned non profit transit systems. The major sources include State and Federal agencies administering funds, for example, through the California Transportation Development Act and the Federal Urban Mass Transportation Administration. The Element also describes, however, local methods of finance that include mutually benefitting contracts with industries, merchants and developers and grants obtained from Federal and State sources to finance bikeways and pedestrian paths.

# CONCLUSION AND POLICIES

In conclusion, the Element notes that dramatic changes must occur in local attitudes before the City can realize an efficient transportation and circulation system. To provide support in this direction, the Element lists policies in three critical areas; street development standards, alternative modes, and area wide considerations.

## STREET DEVELOPMENT STANDARDS

The fifteen policies in this category have to do largely with street construction designed to accommodate new local development. Some emphasis is also placed, however, on integrating bicycle paths into new street systems and providing a safer more convenient environment for pedestrians.

## ALTERNATIVE MODES

The fourteen policies in this category are directed to those modes that will provide alternatives to the automobile. The policies consider, among other things, recreation corridors, consumer needs, regional transit options, and the institution of a multi-model transit system in Fairfield.

## AREA WIDE CONSIDERATIONS

The two policies in this category are directed at coordination and integration of local transit operations with regional and area wide transit systems.

# INTRODUCTION TO THE ELEMENT

# CONTENT AND SCOPE

## GENERAL PLAN COMPONENTS

In essence the Transportation and Circulation Element for the City of Fairfield is only one of a number of individual components which constitute the Fairfield General Plan. In addition to the Transportation and Circulation Element these include the general plan elements for:

Land Use
Housing
Open Space and Conservation
Water Sewer Drainage
Scenic Roadways
Health and Safety
Recreation
Energy

Each element is designed to provide guidance in a certain area of the City's growth and development. Together the elements provide a comprehensive view of the goals, programs and policies that should be employed to shape Fairfield during the next twenty-one years. With the exception of the Recreation, Energy and Water Sewer Drainage Elements, each of the above elements is required by state law.

Further, the General Plan includes a specific plan for the new Cordelia area urban growth center. This plan entitled the Cordelia Area Specific Plan, is designed to provide special development regulations for the Cordelia area and taken together with the Land Use Element for the established Fairfield urban growth center, constitutes the land use program for lands in and proposed to be part of the City of Fairfield. The reader, seeking transportation and circulation information peculiar only to the Cordelia urban growth center should also consult the Cordelia Area Specific Plan.

In addition to these components, the Plan includes a number of other special documents that should be referred to by the readers of this element.

## GENERAL PLAN EIR/ENVIRONMENTAL ASSESSMENT

The General Plan also incorporates the recommendations of an environmental impact report. The findings and conclusions of the Plan are analyzed in this document to assess the impacts they might have on the planning area environment and mitigation measures are recommended in the form of general plan policies that are to be implemented to alleviate adverse environmental impacts that can occur as the Plan is carried out. The potential impacts that can result are summarized as a preface to the policies that pertain to the City's transportation and circulation system. The source for this information is the document called "The Fairfield General Plan EIR/Environmental Assessment" that has been developed to serve as a source of technical information concerning the General Plan and as an assessment of local environmental conditions.

The predominant use of the automobile as a means of travel has led to a wide dispersion of personal travel by allowing greater flexibility in where people chose to live, work and shop. It has reduced the traditional locational constraints on development imposed by fixed transit facilities, and has contributed significantly to diffused and low density land development. While the auto remains an extremely attractive and yet effective mode of transportation, many of the land use problems facing urban areas today are distinctly related to the almost total dependence on the automobile. As the auto is used almost exclusively as a travel mode, particularly in large urban areas, its effectiveness is diminished and its adverse impact on the physical environment is intensified.

In addition, local residents, for example, the elderly, who do not have a car or access to one are unable to reach shopping areas, social and health centers, and places of employment quickly and conveniently. As a result, many residents are unable to take advantage of services existing for their benefit; and are often restricted not only to choice of shopping area, but place of employment as well. Such limited accessibility can limit cities such as Fairfield as a place to live for certain economic and social groupings groups of people.

Thus, a primary purpose of the Transportation and Circulation Element is directed towards describing and implementing alternative modes of transportation in an effort to decrease the individual's dependence on the private automobile. Toward this end, transit, bicycle trail, and pedestrian path facilities are proposed in addition to conventional street and highway improvements for the movement of people and goods within Fairfield.

## CITIZEN PARTICIPATION

In September, 1977, the Fairfield City Council appointed local citizens to serve on the General Plan Review Committee. This body was charged to review the existing general plan for the Fairfield area and make recommendations to the Fairfield Planning Commission and City Council concerning land use, transportation and circulation and recreation policies that would be incorporated into elements of the revised General Plan. In addition, certain committee members were also asked to study and comment on special general plan issues such as energy conservation and policies concerning blighted areas.

During its initial period of review, lasting through June, 1978, the Committee met faithfully on a regular basis to prepare its recommendations which, with very minor exceptions, have been incorporated into this General Plan document. A final review of the draft General Plan was conducted by the Committee in 1979 prior to the presentation of the document to the Fairfield Planning Commission.

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# SECTION 1. EXISTING SYSTEM

## EARLY TRANSPORTATION DEVELOPMENT IN CENTRAL SOLANO COUNTY

In earlier times, Fairfield and the surrounding communities had a relatively efficient system of regional transportation. The waterways and sloughs of the Suisun Marsh were used by shallow draft sailing vessels and cargo barges. These offered a cheap if leisurely means of transporting heavy or bulky items, particularly farm produce, to other Bay Area and Sacramento trading spots. Suisun City served as the central harbor facility for local water-borne traffic. This method of commercial transportaion remained popular until the railroads and trans-bay bridges eventually brought its demise.

Because of its strategic position astride the major rail routes between San Francisco and the interior Valley, Solano County was also well served by railroads. Good passenger and freight service existed from the early 1860's. During the "golden age" of the railroads, several companies operated trains in the County. The main passenger terminal for the Southern Pacific Railroad was located in Suisun City, but eventually was moved to the common border between Suisun City and Fairfield for the convenience of passengers from both cities.

The advent of the automobile during the early 1900's brought many changes both in local and regional transportation. Because the car had much greater difficulty traversing the mud-clogged winter roads than did the horse and wagon, towns began to build better surfaces on city streets. Pressure for more high-quality roads was not limited just to towns. Soon there was improvement of the more important rural roads and of the roads connecting towns and regions together. In short, the automobile revolutionized local land travel, and today is the major influence on our transportation and circulation system.

The present system of streets, roads and highways within the planning area can best be understood by examining their origins as part of a broader city design. The following discussion will review several significant features of this system that are readily apparent in the planning area.

## THE GRIDIRON PATTERN

A map of Suisun and Fairfield will show that the central, older areas, of these two cities have been laid out in a grid pattern. This simple design was found to accommodate the most efficient division of land into uniform saleable parcels. Additionally, the seeming orderliness and efficiency of a grid street layout found favor with early local merchants who saw it as beneficial to trade and business.

While the grid is not always the most efficient traffic mover, it does have several advantages for transportation needs. It allows uniformity in the spacing of streets and roads. It is basically simple and can be easily understood and used by local residents and visitors alike. It is not, however, always well suited to areas of extreme topographical change and conforms poorly to present day patterns of sloping, hillside development.

## CURVILINEAR STREETS

Another look at the map of Fairfield in areas northeast and northwest of older central city areas will reveal a second type of city street design that, while resembling the regularity of the grid, employs curvilinear street alignments. This style of street layout, found in newer residential subdivisions has developed as a reaction to the monotony of the standard grid and the gaining of more efficient access to subdivided parcels.

### COUNTRY ROADS

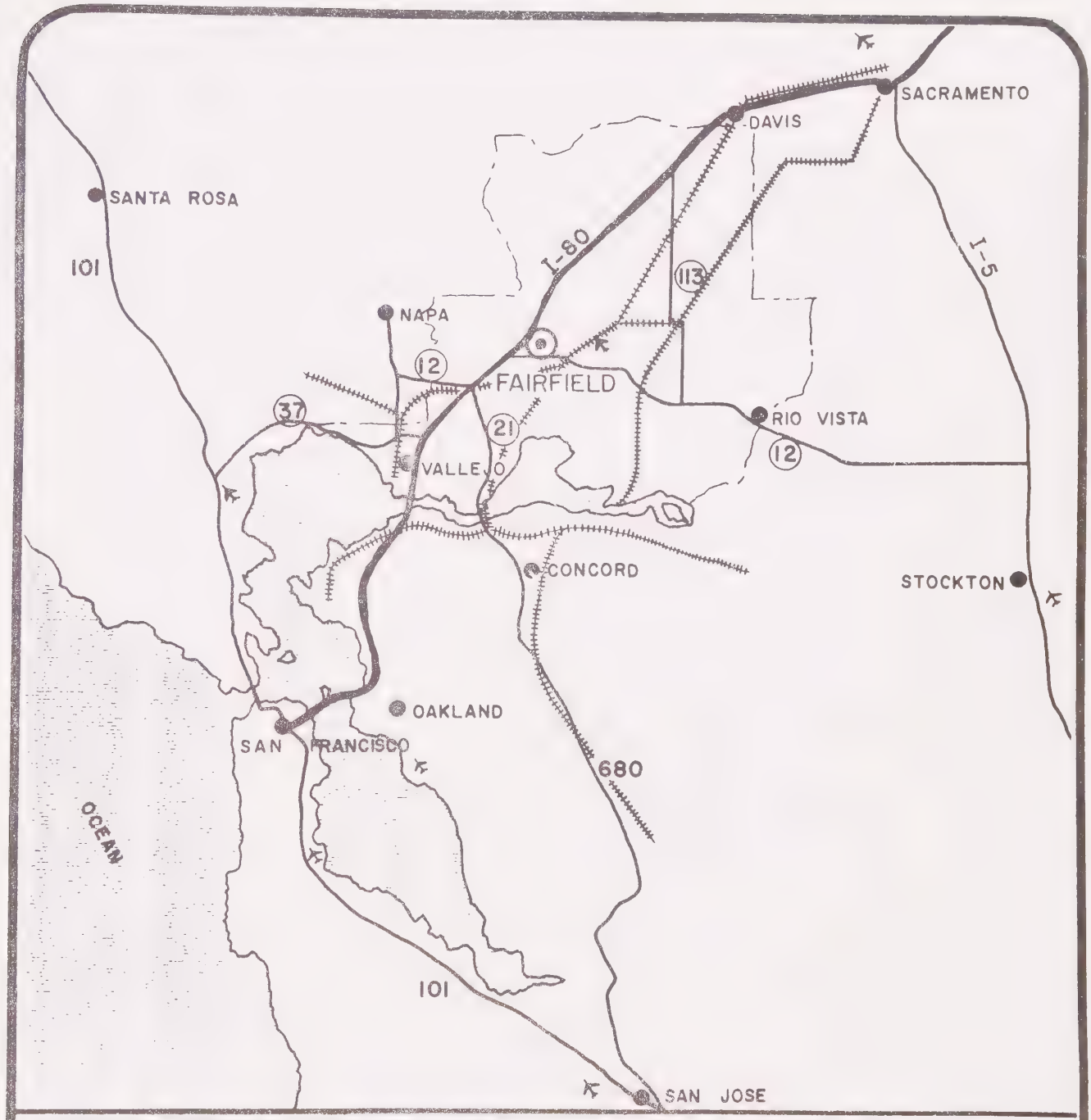
Beyond the perimeter of the built-up areas, and serving rural homes and farms, are a variety of country roads. These roads often have, in addition to a valuable function as part of the regional transportation network, a special nostalgia or historical significance. Characteristically, they conform with the features of the landscape and often afford scenic benefits.

The planning area is richly endowed with such roads. Among the best known are Suisun Valley Road, Green Valley Road, Highway 12 from Cordelia to Napa, and Grizzley Island Road.

## REGIONAL TRANSPORTATION AND CIRCULATION

### ROADWAY FACILITIES

As Figures 1 and 2 show, Fairfield and Suisun City are tied to the outlying areas of the county and the state by a system of regional and interregional travel routes. Principle among these are Highways I-80, 12, and I-680.




**CITY OF FAIRFIELD GENERAL PLAN——TRANSPORTATION ELEMENT**

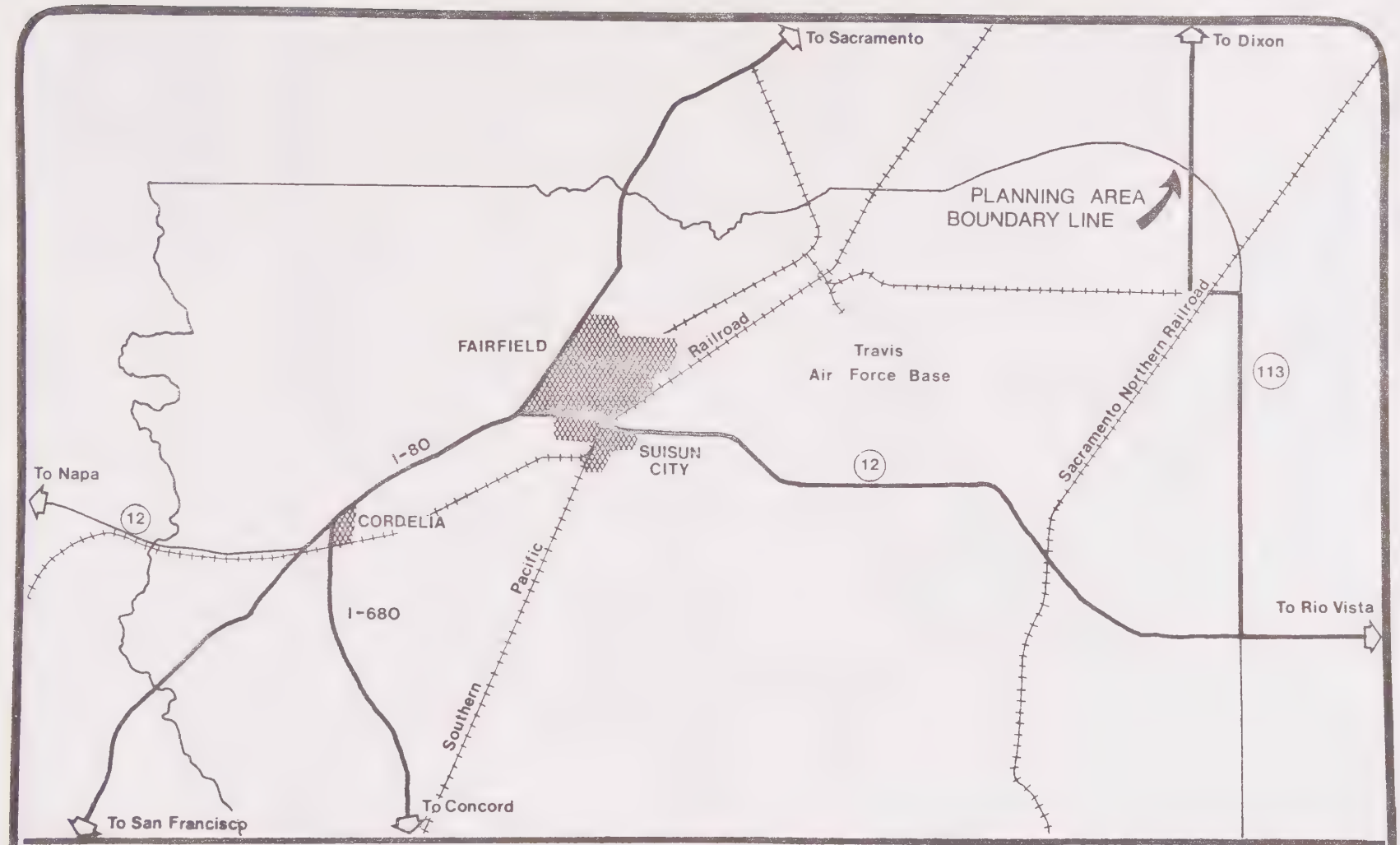
**Regional Transportation and Circulation System**

COMMERCIAL AIRPORTS

MILITARY AIRFIELD

NORTH

**Figure 1**




**CITY OF FAIRFIELD GENERAL PLAN ——— TRANSPORTATION ELEMENT**

**Central Solano County Highway and Railroad Transportation**

**Figure 2**

I-80, a multi-lane freeway, is the major eastwest route from the San Francisco Bay Region to Sacramento, Reno, and points eastward. It is the major, cross-state highway in Northern California, connecting to U.S. 101, U.S. 99, and Interstate 5. I-80 serves several functions: bringing people and business to Central Solano County from outside the area, facilitating travel to or from jobs in outlying cities, and serving local transportation needs.

I-680, a four-lane freeway, connects Central Solano County with Benicia and the cities of Contra Costa County.

Highway 12 is the main route connecting the planning area to Stockton and Delta Region and as well to Napa and Sonoma counties to the north. Although this road is not improved to freeway standards, it carries a steady volume of commercial and private passenger traffic. Highway 12 passes along Texas Street, directly through the heart of downtown Fairfield.

## AIR FACILITIES

Surrounding Solano County are numerous airports for private and commercial aircraft. Within a reasonable driving distance of Solano County are the San Francisco and Oakland International Airports, which provide service to all parts of the U.S., and to the major cities of the world, and the Sacramento Metropolitan Airport, providing domestic service on an ever-increasing scale.

The next largest airports, although not in Solano County, are Buchanan Field at Concord and the Napa County Airport. These are classified as general utility airports, and provide service for a wide range of recreational and business aircraft.

Within local portions of Solano County, there are three general aviation airports providing for privately maintained aircraft. These are the County-owned Nut Tree Airport, the Vacaville Airport, Vacaville Gliderport and the Travis Aero Club.

In addition to the three small airports described above, there are several others in the County, including the Tremont Airport, Maine-Prairie Airport, Rio Vista Airport, Vaca-Dixon Airport, and University Airport.

In Fairfield, Travis Air Force Base has been established as the largest base in the Military Transport Service, and is the headquarters of the Western Transport Air Force. Today it serves as the major air shipment point for passengers and air cargo with destinations in the Pacific Basin. Its cargo handling facilities are presently among the most modern in the nation.

## WATER TRANSPORTATION

Although local area passenger service by water no longer exists, commercial cargo is still carried on Suisun Bay and the Sacramento River. Almost all of the shipping that moves up and down the deep water channel of Suisun Bay and the Sacramento River is bound to ports of call along the river between Stockton and Sacramento and the San Francisco Bay Area. At present, there exists within the planning area access to deep water in the Sacramento River channel by way of Suisun Slough.

Although not heavily exploited, Suisun Slough in Suisun Marsh is still maintained by the Army Corps of Engineers at a minimum depth tide of six feet. The Slough is currently in need of dredging, but this will not be done until acceptable spoils disposal areas can be found. Sheldon Oil Company of Suisun City utilizing commercial barges is currently the only regular user of the slough in this area.

## RAIL FACILITIES

Passenger train service in the planning area with regular stops in Suisun City, was discontinued by Southern Pacific in May 1971. Passenger service was again initiated in 1978 with the AMTRAK San Francisco Zephyer making regular stops in the planning area. At present this is the only passenger train making stops in the planning area with one eastbound and one westbound stop daily. It is anticipated that as demands increase, additional passenger train service will be provided in the area. The Suisun-Fairfield train station is presently being used by the passenger trains, however, consideration of a new station location in the area is now underway.

Freight rail service is available to Central Solano County, offered both by the Southern Pacific Company and by the Sacramento Northern Division of the Western Pacific. Presently, an average of thirty-five freight trains pass this area daily.

## MOTOR VEHICLE SYSTEMS

Western Greyhound and Continental Trailways link Fairfield with Sacramento and the Bay Area, and other cities nationwide. Greyhound provides six trips to San Francisco and Oakland. In addition, direct service is available twice daily to Redding, Portland, and Seattle. Trailways operates two buses each day to Reno and five buses to East Reno and Sparks, Nevada. Both carriers operate from the same depot on Jefferson Street.

Commercial freight service is available both by locally-based truckers, and by many other companies who regularly serve the area from their locations.

# LOCAL TRANSPORTATION AND CIRCULATION

## CITY STREET AND COUNTY ROAD SYSTEM

The network of city streets and county roads shown on the Transportation and Circulation Element Diagram, has evolved in the Central Solano County planning area to accommodate traffic between and within major urban activity centers and agricultural areas.

Streets and county roads which are included in the network for the planning area are classified as "arterial" and "collector" streets, in accordance with their function. The functions of these streets, and of "minor" streets, serving the planning area are as follows:

Arterial streets serve as the principal network for traffic flow; they connect areas of major traffic generation within the urban area and connect with important County roads and State highways; they also provide for the collection and distribution of through traffic to and from collector streets and minor streets serving various sectors of the community.

Collector streets provide for traffic movement between arterials and minor streets, and for movement within activity centers; they also provide direct access to abutting property.

Minor streets provide for access to abutting property and for very localized traffic movements within residential areas.

Roadway capacity is dependent upon factors such as the number of lanes and their width, peak hour flow, percentages of trucks and turning movements. The most critical capacity constraints in the typical urban road system occur at intersections. The combination of through, right and left turn movements from each approach reduces the function of the intersection and, therefore, the road itself. Table No. 1 contains ranges for various types of roadways assuming certain conditions of lane width, turning,, movements, etc. These values have been used to evaluate the volume/capacity ratio of roadways in the study area.

Table 1 describes basic standards of street design. These standards are not to be considered hard and fast rules. There are, for example, compelling reasons to vary from these standards in the case of hillside development. In any event, street designs should be based upon future expected traffic volumes.

Arterials in the planning area include, Air Base Parkway, Travis Boulevard, North Texas Street, Texas Street, East Tabor Avenue, Pennsylvania Avenue, Cement Hill Road, Sunset Avenue, Walters Road, Peabody Road, Waterman Boulevard, Clay Bank Road, Oliver Road, Beck Avenue, Dickson Hill Road, Rockville Road, Chadbourne Road, Cordelia Road, Neitzel Road, Central Way, Pittman, Lopes and Red Top Roads, portions of Green Valley Road, portions of Suisun Valley Road, Walters Road, Dover Road, Scandia Road, portions of Wood Creek Drive, and Main Street in Suisun, with the first four being the major local thoroughfares in Fairfield.

## TABLE 1

## BASIC STANDARDS OF STREET DESIGN

| Street Classification | Average Daily Traffic (ADT) | Width of Right of Way[1] | Width of Pavement Between Curbs[1] | Traffic Lanes No. | Traffic Lanes Width | Parking or Transit Lanes No. | Parking or Transit Lanes Width | Width of Planting Strip | Width of Median |
|---|---|---|---|---|---|---|---|---|---|
| Minor | 0- 500 | 50' | 36' | 2 | 10' | 2 | 8' | 5' | |
| Collector | 500- 6,500 | 60' | 40' | 2 | 12' | 2 | 8' | 10' | |
| | 6,500- 8,500 | 68' | 48' | 2 | 12' | 2 | 8' | 10' | |
| (Rural) | 1,000- 8,500 | 70' | 40' | 2 | 12' | 2 | 8'(3) | 15 | |
| Arterial | 8,500-16,000 | 116' | 96' | 4 | 14' | 2 | 8' | 10' | 16' |
| | 16,000-35,000 | 128' | 108' | 4 | 14' | 2 | 12'(2) | 10' | 28' |
| (2-lane Rural) | 1,000- 8,500 | 80' | 40' | 2 | 12' | 2 | 8'(3) | 20' | |
| (4-lane Rural) | 8,500-25,000 | 120' | 100' | 4 | 14' | 2 | 8'(3) | 10 | 28' |

(1) Pavement or right-of-way width may vary, depending on design of development served.
(2) Transit Lane; on-street parking to be prohibited
(3) Eight foot shoulders - No parking or transit lane.
(4) Additional turn lanes and/or channeled islands may be required at intersections.

Source: Fairfield Dept. of Public Works

## CURRENT DEFICIENCIES

Information concerning existing volumes and levels of service on highways and freeways in the planning area is given in the General Plan EIR/Environmental Assessment. Traffic conditions on critical arterials in Fairfield are also given in the Environmental Assessment. In general, capacities of the planning area, roadways, and on arterials within Fairfield are adequate for current daily volumes. The major exception to this is Texas Street, east of Pennsylvania Avenue, which currently is carrying traffic in excess of its capacity. Also, two intersections within Fairfield approaching capacity are the Texas Street/Pennsylvania Avenue and the Travis Blvd/North Texas Street intersections.

A major deficiency in the existing Fairfield street system is the lack of adequate east-west traffic facilities. This is due to the limited number of roads which cross Interstate 80 and the limited number of continuous east-west streets in the area east of Interstate 80. The lack of east-west movement is most severe in the area between Pennsylvania Avenue and North Texas Street, as well as areas north of Travis Boulevard.

In addition to restricting east-west movements, Interstate 80 poses problems at its intersecting with the local street pattern. The two most crucial intersections at this time are the I-80/Travis Boulevard and I-80/Air Base Parkway intersections; both suffer from a lack of adequate traffic carrying capacity.

## PUBLIC TRANSPORTATION

DART, a City operated system, provides public transportation to all residents of the City of Fairfield with the exception of Travis Air Force Base and the Cordelia Growth Center. DART is a demand responsive or dial-a-ride system which accepts requests for service on an immediate response basis as well as providing deferral and subscription service. DART operates six vehicles and provides service Monday thru Saturday.

Vaca Valley Bus Line is a private carrier that operates between downtown Fairfield and Travis Air Force Base over a fixed route. A single 25 passenger bus is used and 11 runs per day are provided Monday thru Saturday generally between the hours of 7:30 a.m. and 6:30 p.m.

The Yellow Cab Company is Fairfield's principal taxi-cab operator. The cab company operates a fleet of ten taxi-cabs in Fairfield and Suisun and provides service 24 hours a day.

When the DART system is not in operation, elderly and handicapped Fairfield residents are eligible to receive reduced fares on the taxi system.

Project MOVE is a transportation service affiliated with the Solano County Economic Opportunity Commission. The service operates primarily through agencies and organizations that provide for the needs of elderly and handicapped persons. The service area of Project MOVE includes all of Solano County. Because of the demands placed on the system by such a broad area, Project MOVE concentrates on serving intercounty and intercity trips rather than trips within the City of Fairfield.

# SECTION 2. SYSTEM PROPOSALS

## FUTURE HIGHWAY NEEDS

Projected traffic increases resulting from anticipated development will result in deteriorating traffic conditions on several streets and roads in the planning area. By the year 2000, and earlier in some instances, motorists can be expected to experience delays and backups with traffic flows restricted on several roads. Information concerning projected volumes and levels of service on highways and freeways in the planning area is contained in Table 28 in the General Plan EIR/Environmental Assessment. Table 29 in the Environmental Assessment provides information on projected conditions on critical arterials in Fairfield. Except for isolated instances, the existing road system has adequate capacity to handle present traffic volumes.

However, as development within the planning area continues to expand, traffic volumes will increase dramatically, straining the system to provide adequate carrying capacity. As traffic volumes increase, motorists will initially find travel speeds somewhat reduced by restricted traffic conditions. As traffic volumes continue to increase, there will be greater restrictions on speeds and maneuverability until the motorist begins to experience substantial delays during peak periods. The periods of sustained delays and back-ups will eventually extend beyond the peak periods up to the point where the motorist experiences common stop and go movements throughout the day.

Traffic conditions of this nature may occur on arterials within the planning area by the year 2000 or earlier if there are no significant changes on the street system and if travel patterns are not constrained by existing street capacities. In this regard, it should be noted that increasing congestion on arterial streets would result in a shifting of traffic to the collector and minor residential streets.

By the year 1985, motorists will experience increased traffic congestion on several Fairfield arterials. Motorists can expect to face unstable flows with substantial delays during peak periods and delays during other periods on the following arterials:

Texas (east of Pennsylvania)
Travis Blvd. (east and west of Pennsylvania)
Air Base Parkway
Pennsylvania (north of West Texas)
North Texas (north of Travis)
Walters Road (between Tabor Avenue and Air Base Parkway)
Peabody Road
Sunset Avenue (south of Travis Blvd.)
Rockville Road (east of Suisun Valley Rd)

As development occurs within the planning area, the deficiencies of intersections along I-80 will become even more apparent than they are currently. These intersections include Interstate 80 and Redtop Road/Highway 12 (at Cordelia), I-680 (Green Valley Road), Suisun Valley Road, Abernathy Road (at its intersection with Highway 12), Rio Vista (West Texas Street), Travis Boulevard, Air Base Parkway, and North Texas Street.

By the year 2000, traffic volumes on I-80 will exceed its current design capacity, resulting in restricted traffic flows with sustained delays and back-ups.

In order to improve the traffic conditions described above, a transportation and circulation system to accommodate expected future development is described in the following pages. This portion of the system is concerned principally with the regional highway system and planning area roadway system. The development of a transit system that will provide an alternative to automobile use is discussed in the following section.

## THE REGIONAL HIGHWAY SYSTEM

Highway 12, between the planning area, Rio Vista and Stockton, should be constructed as an expressway. It should be a four to six lane facility and, in the vicinity of Fairfield, should be located between the natural perimeters of Suisun Marsh and the limits of planned urban development. This last point is particularly important. Highway 12 now follows West Texas Street, an urban arterial serving portions of the Fairfield Central Business District, between Highway I-80 and Union Street. Vehicular traffic volume along a street of this character should not exceed 12,000 units per day, yet traffic counts indicate that the street is utilized by 15,000 - 20,000 vehicles per day (vpd). The heavy traffic on West Texas Street, particularly truck traffic, represents a serious overloading of the street and substantially detracts from the commercial amenities offered there.

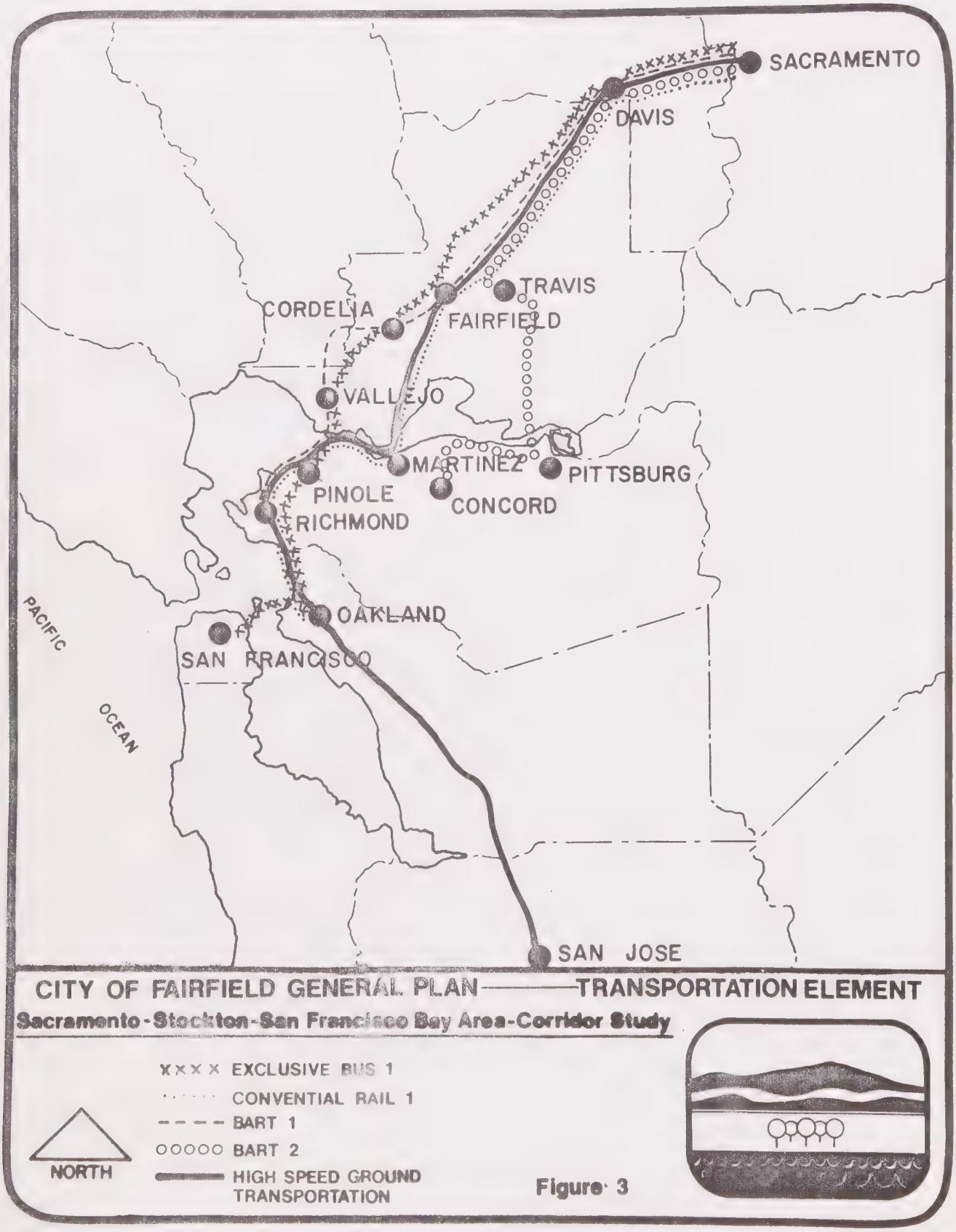

SACRAMENTO
DAVIS
TRAVIS
CORDELIA
FAIRFIELD
VALLEJO
MARTINEZ
PITTSBURG
PINOLE
CONCORD
RICHMOND
OAKLAND
SAN FRANCISCO
PACIFIC
OCEAN
SAN JOSE
CITY OF FAIRFIELD GENERAL PLAN——TRANSPORTATION ELEMENT
Sacramento-Stockton-San Francisco Bay Area-Corridor Study
XXXX EXCLUSIVE BUS 1
CONVENTIAL RAIL 1
BART 1
BART 2
HIGH SPEED GROUND TRANSPORTATION
NORTH

Figure 3

Due to the difficulty in obtaining State of California Department of Transportation Financing for the relocation of Highway 12, the City of Fairfield has taken the initiative in developing an interim solution.

The State's current Route 12 bypass proposal is basically a two lane expressway between the existing Highway 12 (Rio Vista Road just south of the Suisun City Corporation Yard), and the new Abernathy Road interchange with Interstate 80. Access would be limited to at-grade intersections at the Abernathy Road interchange, at Pennsylvania Avenue, and possibly at an extended Beck Avenue (just east of I-80). There would be no at-grade intersections between Pennsylvania Avenue and the existing Rio Vista Road. Access would occur through on and off-ramps connected to the local streets network. Six lanes would be provided at the railroad overpass to allow for acceleration, deceleration, and merging.

Ultimately, Highway 12 should be upgraded to freeway standards. This would involve construction of four travel lanes from the Abernathy Road/I-80 interchange east to the roadside overcrossing which would remain at 6 lanes. Grade separations would be constructed at South Pennsylvania Avenue, Chadbourne Road and possibly Beck Avenue. An improved interchange probably would be required between Highway 12 and I-80 to eliminate the existing interchange at Abernathy Road.

Interstate 80 is presently four lanes of traffic in both directions and could be expected to handle upwards of 75,000 vehicles per day in each direction, 15,000 vpd more than it is presently carrying. The traffic generated by proposed development in the Cordelia urban growth center, however, resulting in an estimated 40,000 new inhabitants, as well as the addition of 40,000 new inhabitants in the Fairfield community, plus increased local industrial development will most certainly push I-80 over its practical capacity within the next few years. To lessen the overcrowding of the major link, the Cordelia Area Specific Plan recommends that local public transit be provided, and also, that provisions be made for a local road system that will parallel I-80 and offer an alternative to individuals making local trips between Fairfield and Cordelia.

Additional relief to congestion on I-80 could be realized by the institution of high-speed mass transit or such other things as increased vehicle occupancy by ride sharing, increased use of high occupancy vehicles, ramp metering, staggered work hours and flex time.

## TRANSPORTATION CORRIDORS

It is conceivable that a high-speed mass transit system could, within the time of this plan, be provided through the Fairfield/Suisun/Cordelia vicinity linking the San Francisco Bay Area and the Sacrameto Metropolitan regions. The Metropolitan Transportation Commission (MTC) completed a study in 1973 that evaluated alternative transit systems for the Sacrameto-San Francisco-Stockton Corridor. Of the nine systems evaluated, five of them would directly affect the planning areas. These are shown on Figure No. 3 and described as follows:

Exclusive Bus 1 Connects San Francisco and Oakland with Sacramento along an exclusive or reserved right-of-way paralleling I-80. Stations are located at San Francisco, Oakland, Vallejo, Fairfield/Travis and Sacramento.

Conventional Rail 1 Connects Oakland with Sacramento through Martinez along existing railroad rights-of-way. Between Fairfield and Sacramento, the alignment is parallel to route 80. Stations are located at Oakland, Martinez, Fairfield/Travis, Davis, and Sacramento.

Bart 1 An extention from the Richmond Station north along existing railroad rights-of-way, approximately paralleling Route 80. Stations are located at Richmond, Pinole, Vallejo, Cordelia, Fairfield/Travis, Davis, and Sacramento.

Bart 2 An extension from the Concord Station east to Pittsburg, then north to Sacramento along existing railroad rights-of-way. This alternative includes five stations located at Concord, Pittsburg, Fairfield/Travis, Davis, and Sacramento.

High Speed Ground Transportation (tracked levitated vehicle) Connects San Jose to Sacramento. The alignment runs along the East Bay shoreline, through Martinez and north along existing railroad rights-of-way paralleling Routes 680 and 80. Stations are located at San Jose, Oakland, Fairfield/Travis, and Sacramento.

The establishment of a high speed transportation corridor would probably have a significant impact on the circulation system in the Planning Area. The three most notable effects would be:

(1) A reduction in the automobile traffic volume along the major freeways now connecting the Bay Area and the Sacramento Metropolitan region.

(2) An increase in the desirability of the Planning Area as a home base for commuters.

(3) An increase in commercial and industrial development due to increased accessibility by customers, workers, suppliers, etc.

It is recognized that for the immediate future, the two alternatives that are most feasible are the improvement of existing bus service, possibly in the reserved right-of-way, and the improvement of existing rail service.

It is recommended that the local cities continue to cooperate with Solano County, the MTC and State of California Department of Transportation to establish high-speed mass transportation in the corridor.

## REGIONAL AIRPORT SYSTEM

In April of 1974, the Metropolitan Transportation Commission (MTC) and County of Solano entered into a joint exercise of powers agreement to develop a feasibility study of the civil/military joint use of Travis Air Force Base to serve the air travel needs of the northern Bay Area.

The report, issued in July 1976, came to the following general conclusions:

(1) Civil use of Travis AFB is not required to provide additional San Francisco Bay Area airport system capacity during the next 20 years.

(2) There is a growing need for a North Bay commercial air passenger service facility to reduce vehicle miles of travel to airports in the region and the resulting production of automobile pollutants and energy consumption.

(3) Travis has regional importance in that it can conveniently serve a significant portion of North Bay air travel demand.

(4) Although, subject to further study, there are no physical or environmental constraints anticipated, that cannot be satisfactorily mitigated in a civil/military joint-use of Travis AFB.

The study states that the basic options for civil air service at Travis were to either "do nothing" or "initiate air service" with subsequent development of civil airport facilities at Travis. The "do nothing" alternative could be selected initially, or after promotion and determination of interest by air carriers. The initiation of air service would require active promotion of air carriers, a detailed master planning and environmental study, and construction of initial facilities to provide suitable service at Travis. Proper performance of the necessary planning, environmental, design and construction efforts will take over four years.

On January 11, 1977, the Solano County Board of Supervisors adopted the following recommendation in regard to the joint use of Travis feasibility study: "that Travis Air Force Base represents a valuable aviation resource to the County and the Bay Area and that necessary planning be undertaken to preserve its future availability as an airport. That the County continue to keep in effect its joint use agreement with the Air Force. That, at the appropriate time to be determined in the preliminary planning process, a staff promotional program to determine the interest of the air carriers be initiated."

It is recommended that the policy of the Board of Supervisors regarding a possible regional airport at Travis AFB be incorporated into the Transportation and Circulation Element. This policy would allow the local cities and County to retain the option of developing the joint facility at a later date.

The element recommends that the area surrounding Travis be designated on the General Plan Diagram as an "Extensive Agricultural Reserve for Air and Related Industrial Uses." At the appropriate time in the planning process, a specific plan should be developed to produce more definite land use patterns in the area.

## RAIL AND WATER

Existing rail facilities will continue to be an important part of the regional freight transportation picture, but no major expansion of facilities is anticipated. Minor extensions may be expected in developing industrial areas, depending on the types of raw materials and finished products needed for specific industries.

Local barge and ship traffic will continue in the future much as it has in the past. It is not anticipated that future industry in the planning area will have a need for major channel dredging through Suisun Marsh to accommodate deep sea vessels. Should the expansion and improvement of existing channel facilities be warranted in the future, it is recommended that great care be taken to mitigate adverse environmental impacts on the Marsh arising from such action.

## THE PLANNING AREA ROAD SYSTEM

The roads to which the following recommended changes apply are shown on the General Plan Transportation and Circulation Diagram No. 1 that accompanies this Element.

Rockville Road This is presently a major access road to the Solano Community College site, as well as Green Valley and Rockville Hills Park, from the Fairfield area. It is considered desirable at this time to leave this facility as a two-lane rural arterial in order to preserve its scenic qualities and discourage development along its route through the Suisun Valley. It is, however, recognized that some time in the future it may be necessary to construct Rockville Road as a four lane facility. In order to retain this option, it is recommended that the necessary right-of-way for a four lane facility be preserved along Rockville Road east of Suisun Valley Road.

Waterman Boulevard/Mankas Corner Road Projected traffic loads on this route reach the upper limits of the volume capable of being accommodated on a two-lane facility. Inasmuch as this roadway is one of the logical routes between shopping and business etablishments in Fairfield and future suburban development west of I-80, it is recommended that this roadway be developed to a fourlane arterial from its proposed intersection with Air Base Parkway to the Oliver Road intersection. From Oliver Road west, this facility should remain a two-lane, rural arterial to preserve the agricultural character of Suisun Valley.

Suisun Valley Road This roadway, from Rockville Road south to the Cordelia growth center is a major carrier of traffic for Solano Community College and can be expected to carry increasingly larger volumes of traffic as the Cordelia Area develops. This section is now being developed to four-lane arterial standards. North of Rockville Road, however, it is recommended that this facility should remain a two-lane rural arterial to preserve the rural character of Suisun Valley.

Green Valley Road This roadway, according to the Cordelia Specific Plan, will need to be developed to four-lane arterial standards within the Cordelia growth center, and remain a two-lane, rural arterial from the Cordelia urban growth center limits to the upper Green Valley residential area.

Oliver Road To meet the demands created by proposed residential development west of I-80, this roadway will need to be constructed to four-lane arterial standards to adequately handle the projected traffic volumes expected to utilize this route as a major thoroughfare into the central Fairfield area from I-80 westbound offramp to Waterman Boulevard.

Cordelia Road As industrial and residential development occurs in the Cordelia growth center, and in the area proposed adjacent to the Fairfield growth center, Cordelia Road can be expected to become an important traffic link between the two areas. It is recommended that this roadway be realigned to eliminate existing curves and be constructed to four-lane arterial standards with a median to handle increased traffic volumes. Cordelia Road should be designated as a "scenic highway".

The City shall provide a route study for Cordelia Road between the town of Cordelia and Pennsylvania Avenue and study the new alignment of Cordelia Road north of the existing railroad right of way between Chadbourne Road and Pennsylvania Avenue.

Chadbourne Road As stated in the Cordelia Plan, this roadway will require development to four-lane arterial standards with a median from I-80 to Cordelia Road in order to handle the increased truck and auto traffic volumes generated by industrial development located to the west of this roadway.

Beck Avenue From Texas Street south to Cordelia Road is recommended the construction of a four-lane arterial to provide access to a proposed relocated Highway 12 to serve residential areas along I-80 and proposed industrial development to the south of Fairfield.

Peabody Road This is currently a major route between Vacaville and Travis Air Force Base. With increasing industrial development in the Travis area, its role will be even more pronounced. It is recommended that this route be a divided, four-lane expressway from Air Base Parkway north to Vacaville.

Cement Hill Road It is recommended that this roadway be constructed to four-lane arterial standards with a median from North Texas Street east to Peabody Road. This facility will serve as a major east/west route for the proposed residential and industrial development north of Air Base Parkway.

Walters Road This facility will be expected to serve the proposed industrial areas east of this roadway as a major north/south route in the eastern half of Fairfield. It is recommended that this road be developed with a median to four-lane arterial standards from its interchange with Highway 12 north to a new arterial proposed beyond Cement Hill Road.

Walters Road should be realigned south of Cement Hill Road to intersect Cement Hill Road east of Sacramento Northern Railroad right-of-way consistent with draft General Plan and Use Diagram.

Clay Bank Road This road will serve as a major north/south thoroughfare connecting proposed residential development in the north with Highway 12 to the south. It is recommended that this roadway be constructed to four-lane arterial standards from the proposed arterial north of Cement Hill Road south to Highway 12.

Sunset Avenue It is recommended that this roadway be constructed to four-lane arterial standards from East Tabor Avenue south to its intersection with Highway 12.

Scandia Road To handle the truck traffic from Highway 12 to the warehouse district in the central area of Travis Air Force Base, it is recommended that this roadway be developed as a four-lane arterial from an interchange with Highway 12 to the south gate of Travis Air Force Base.

Dickson Hill Road A new east/west roadway developed to four-lane arterial standards is recommended north of Cement Hill Road running parallel to Putah South Canal from North Texas Street to its intersection with Cement Hill Road. This facility will serve proposed residential and industrial development north of Cement Hill Road and west of Peabody Road.

Dover Avenue It is recommended that this facility be developed to four-lane arterial standards from Tabor Avenue north into the Paradise Valley area. Dover Avenue can be expected to serve as a major north/south thoroughfare affording residents an alternate route other than Texas Street in reaching Air Base Parkway and points further south. The City shall study Dover Avenue between Putah South Canal and Nelson Road to determine street alignment and width.

East Tabor Avenue It is recommended that East Tabor Avenue be developed to a four-lane arterial from Dover Avenue east to Walters Road. This facility can be expected to serve as a major east/west route through proposed residential development in this area. It is not recommended that Tabor Avenue be extended from its present east terminus to North Texas Street. This extension is not recommended since it would provide only a moderate improvement to traffic conditions and would be to the detriment of the existing local residential areas.

Pennsylvania Avenue It is recommended that this facility be continued as a four-lane arterial south of Texas Street to an interchange with Cordelia Road and the proposed relocation of Highway 12.

Texas Street between I-80 and Taft Street This route will continue to serve a major role in the Fairfield circulation network even after Highway 12 is relocated to the south of the City. Currently, there are four traffic lanes (except between Pennsylvania Avenue and Union Avenue where there are two parking and two traffic lanes) on a pavement width which varies between 50 and 60 feet within an 80-foot right-of-way. The 1977 vpd (vehicles per day) on this section of Texas Street ranged from 27,900 near I-80 to approximately 19,000 near Taft Street. Traffic volumes in this route have been projected to increase 30 per cent over the next 10 to 15 years. However, since it would only allow more traffic to flow through the Fairfield Central Business District (CBD), increasing the noise and air pollution in the shopping district, this plan does not propose widening along this portion of Texas Street. The Plan and Action Program for the Fairfield CBD recommends that the existing 14' sidewalk cross-section on Texas Street in the CBD be retained for ease of pedestrian flow and for the accommodation of street furniture. The construction of a semi-mall on Texas Street between Madison and Jefferson Streets is also a possibility.

North Texas Street between Taft and Air Base Parkway This street has a 64-foot wide pavement within a right-of-way varying between 90 to 100 feet. Traffic volumes in this area exceeded 26,000 vehicles per day in 1977 and it is anticipated that the potential future loading will exceed 40,000 vpd, which would warrant a six-lane divided facility. Widening this section of Texas Street would, however, have its disadvantages since the increase in traffic resulting from additional lanes would escalate existing noise, air and visual pollution in this district.

It is recommended that selected widening of this section of Texas Street occur at locations where additional capacity is required. This would generally involve additional turning lanes at the major intersections and acceleration and deceleration lanes at the major driveways. It is also recommended that driveways be grouped together wherever possible and that access to commercial land uses be changed to side streets. Finally, it is recommended that the two-way left-turn lanes be replaced with a raised, landscaped median with exclusive left-turn lanes at appropriate locations.

North Texas Street between Air Base Parkway and I-80 This route will play a major role in accommodating traffic between new residential areas and commercial areas along Texas Street. Commercial and residential development north of Air Base Parkway has warranted the construction of a four-lane divided roadway up to I-80. At the present time, an improved traffic interchange is under construction at the intersection of North Texas Street and Air Base Parkway to adequately handle increased traffic volumes.

Travis Boulevard This east/west route will continue to be a major carrier of traffic between I-80 and the regional commercial center at Pennsylvania Avenue and the proposed retail and commercial area east of Sunset Avenue. It is recommended that Travis Boulevard from I-80 to Pennsylvania be widened to six-lanes to accommodate shopping center traffic. From Pennsylvania Avenue to just east of North Texas Street it is recommended that selected widening on Travis Boulevard occur. This widening would occur at those locations that need capacity increases, such as intersections and major driveways. It is also recommended that a raised, landscaped median with exclusive left-turn lanes at appropriate locations be constructed along this section of Travis Boulevard.

It is also recommended that improvements be made at the North Texas Street/ Travis Boulevard intersection to facilitate traffic flow through this intersection. This would include the widening of all approaches to the intersection and provision for turning lanes.

From east of North Texas Street to Sunset Lane it is recommended that Travis Boulevard be developed as a four-lane divided roadway.

New Arterial Pennsylvania Avenue to North Texas Street Various alignments for a new road to improve east-west traffic flow between Pennsylvania Avenue and North Texas Street, and north of Travis Boulevard, have been studied. Along with improvements to North Texas Street and Travis Boulevard that have previously been discussed. The alternative that would be most advantageous to improvement of east-west traffic is an alignment which would extend from the North Texas Street/East Tabor Avenue intersection, southwesterly along the Sacramento Northern Railroad right-of-way, to Fairfield Avenue. From Fairfield Avenue the roadway would turn and proceed due west to Pennsylvania Avenue passing the Intercommunity Hospital.

It is not recomended that this roadway be constructed in the short term, but rather that the City make every effort to insure that the option to build this road at a future date remain open. This means that when the 100 foot railroad right-of-way is developed as a linear park that it be developed in such a way that a 32-foot wide section be preserved to allow the construction of a 2-lane road without major costs and damages.

Additional new arterials as recommended in this Element include:

(1) An aertial loop around the old Cordelia townsite.

(2) Two east/west connections between Green Valley and Suisun Valley Roads north of I-80.

(3) Conversion of the frontage road on the western side of I-680.

(4) New major arterials west of I-680 and south of the railroad including Lopes Road.

(5) Red Top and Pittman Roads

(6) Development Wood Creek Drive between Capitola Drive and Pennsylvania Avenue and Second Street between Travis Boulevard and Wood Creek Drive.

Downtown Traffic Circulation

A recently prepared CBD revitalization plan proposes no street closures. Major east/west (Texas Street) and north/south (Webster Street) routes would be kept open. Jackson Street is designated as a pedestrian semi-mall area, major connections to the relocated highway 12 would be at Webster Street for westbound Highway 12 traffic and Jefferson Street for eastbound traffic.

The CBD plan does not presently show off-street parking areas, but it is recommended that existing parking deficiencies in the CBD should be met as soon as possible.

Improved Road Interchange

Due to inadequate capacities and safety problems it will be necessary to improve or realign virtually every freeway interchange within the City limits. The recommended improved interchanges are at the following locations.

Interstate 80 at:

(1) The intersection of I-680 at Cordelia.

(2) The intersection of Highway 12 and Abernathy Road. The design of this interchange will depend on which alternative for the Highway 12 realignment is selected. This project should be a high priority since it will be necessary to make the Highway 12 bypass function properly.

(3) The intersection at Air Base Parkway. The reconstruction of this interchange is a high priority due to its present limited capacity.

(4) The intersection at Travis Boulevard. The improvement of this interchange is the most critical of all the interchange improvements due to the need to provide improved access to the Fairfield Commercial Regional Center area.

(5) The intersection of North Texas Street. It may be necessary to relocate the existing interchange from its present location further north to the vicinity of Paradise Road.

(6) The intersection of Texas Street and I-80. Several ramp modifications are proposed at this intersection. Additionally Rockville Road, Oliver Road and Texas Street will be realigned to form a cross intersection. The City shall study the interchange at Texas Street and Rockville Road for future alignment and need.

Highway 12 at:

(1) The proposed intersection with Sunset Avenue/Grizzly Island Road.

(2) The proposed intersection with Pennsylvania Avenue.

(3) The intersection at the Proposed extension of Walters Road.

(4) At Suisun City.

(5) The intersection with Chadbourne Road.

(6) The intersection with Beck Avenue.

Improved Road Interchanges in the Cordelia area include:

(1) Interchange of I-80 and Suisun Valley Road.

(2) Interchange of I-80 and Green Valley Road.

(3) The western-most interchange along I-80 (at Red Top Road).

(4) A new interchange along I-680 may be necessary. This interchange would be located approximately midway between I-80 and the existing Gold Hill interchange.

The improvements to the above four interchanges are mandated by development potential in the Cordelia area. The timing for these improvements will be based on the pace of development within the Cordelia area.

(5) The southern-most interchange along I-680 may not in fact be required as proposed in the Cordelia Plan. If it is not required the major arterial between the middle and southern interchanges along I-680 would have to be constructed as a four-lane divided arterial.

In addition to the proposed interchange improvements to the regional highway system the feasibility of several grade separations construction projects of the local street system need to be considered. These grade separation projects are as follows:

(1) Air Base Parkway and Walters Road.

(2) Walters Road and Southern Pacific Railroad tracks.

(3) Peabody Road and Southern Pacific Railroad tracks.

(4) Sunset Avenue and the Southern Pacific Railroad tracks.

Based upon existing funding limitations and priority for other road improvements it is not anticipated that the above four intersection improvements could be accomplished until after 1990.

## PRIORITIES

Highway 12 Relocation

The top priority for the City of Fairfield in regards to the improvement of the circulation system is the relocation of Highway 12 between Interstate 80 and Rio Vista Road. The official City position is that this project is needed in order to improve the flow of traffic, reduce traffic congestion and improve safety on the existing Highway 12 within the City of Fairfield.

The first phase of construction of this project will be the construction of the portion from Pennsylvania Avenue to Marina Street with the second stage being the construction of the bypass from Abernathy Road to Pennsylvania Avenue. The third phase would be upgrading the facility from expressway status to a freeway by the construction of grade separated interchanges at Pennsylvania Avenue, Chadbourne Road and possibly at Beck Avenue.

In conjunction with this project a high priority should be given to the construction of an improved interchange of the realigned Highway 12 and Interstate 80.

Due to the magnitude of this project, construction will be staged over a 3 year period and therefore it is anticipated that the project will remain the City's top priority for the next several years.

Freeway Interchanges

The improvement of the various freeway interchanges within the City limits is also a high-priority item. The top priority among these freeway interchange improvements is the interchange of Travis Boulevard and I-80. The second priority in this area is the reconstruction of the interchange of Air Base Parkway and I-80. The improvement of the interchange at West Texas Street and I-80 is presently programmed for realignment during fiscal year 1979-80 and will be financed by the California Department of Transportation.

East-West Circulation

Another area of high priority is the improvement of east-west traffic circulation within the City of Fairfield. In order to reach an acceptable level of service it is necessary to implement more than one project in this area. The three projects that should be implemented now are the improvement of the Travis Boulevard/North Texas intersection, the selected widening of North Texas Street and the selected widening of Travis Boulevard.

At a later time, when conditions warrant it, the City should consider developing a portion of the abandoned Sacramento Northern Railroad right-of-way as an arterial street to provide improved east-west traffic circulation commencing at North Texas Street and terminating at a location to be determined on Pennsylvania Avenue. This arterial would share space along the right-of-way with the City's planned Linear Bikeway System shown on Figure 5, Fairfield Bikeway Plan, and as shown on the Transportation and Circulation Element Diagram.

## Further Priorities

Beyond the projects described above the City has not established a specific list of priorities for improvements to the planning area roadway system. One reason for not establishing such a list is due to the City's policy of funding such projects. In most cases such improvements will not be made until specific development programs require them. The City policy for spreading the cost of road improvements is that the developer must pay for standard improvements up to one parking lane and one travel lane. Any additional improvements or widening is paid for by the City. The additional funds for the City to pay for the cost of widening comes from fees paid by new construction. It is clear that in order for the City to make the necessary improvements to the circulation system to keep pace with the rate of new development it will be necessary to allocate capital beyond that collected for new construction, to assist in the construction of new arterials as well as to improve existing ones. Furthermore, because of the large capital investment needed for these improvements it is questionable if necessary improvements can be made to keep pace with the rate of new growth. In fact, it is likely that traffic congestion at intersections in new city growth areas, and at certain key existing intersections, will worsen as development proceeds due to the City's inability to finance necessary improvements.

It is recommended that the City of Fairfield establish priorities of improvements to the circulation system in relation to need, funding availability and the rate of new development. The establishing of such priorities will also serve to indicate the level of traffic congestion the City will tolerate before improvements are made to the City's road system.

Because the above planning area roadway system is an amibitious program and subject to significant environmental and financial considerations full implementation may not occur within the life time of the plan. It is, therefore, recommended that before embarking on a road improvement program involving large sums of money that projects make maximum use of existing transportation resources by making short-range, low capital cost improvements. Additionally, it is recommended that existing and impending transportation deficiencies be corrected before high-capital cost improvements are implemented.

Examples of low-capital cost improvements that would make more efficient use of the existing street system includes:

(a) channelization of traffic

(b) one-way streets/couplets

(c) better signalization

(d) computerized traffic control

(e) intersection improvements

(f) safety modifications/facilities

(g) peak hour parking prohibition

(h) enforcement of all parking restrictions

(j) bus turnouts

(k) bikelanes

# SECTION 3.

# ALTERNATIVES TO PRESENT SYSTEM

## COPING WITH THE AUTOMOBILE

It seems apparent that the automobile, or a machine very much like it, will remain a major form of private transportation in the foreseeable future. Solano County for example, had 408 autos per 1,000 population in 1962 for a total of 58,487 automobiles. By 1972, this figure has risen to 487 autos per 1,000 population for a total of 88,848 autos.

While it does not appear at this time that any substitute can begin to match the auto's versatility and convenience, the automobile does have its drawbacks; for example, excessive noise and its high risk of injury or death to those in it or around it and its continuing capacity to pollute the air. It should be noted in this last regard that 57 percent of the present air pollution in Central Solano County results from motor vehicle emmissions.

Although local government can do little to affect the development of the vehicle itself, there are other areas which it can affect. Noise, safety and some aspects of pollution, as well as general amenities can all be improved through urban physical design. Alternatives to the automobile and the roads it requires, some as simple walking and bicycling, can be encouraged.

## DESIGN ALTERNATIVES

A good place to start a discussion of alternatives is by asking the question "if the car is to remain with us, how might its presence be made less conspicuous?"; and "if roads and streets are going to occupy a major part of urban land, and if we are going to spend a good deal of our time upon them, how can they be made more attractive visually to those living near roads, and to those using them?" In some of the largest U. S.cities, as much as 75% of the downtown land is used for motor vehicle operation and parking. The amount of land devoted to parking in the Fairfield CBD, as shown on Figure 4, constitutes 12% of the downtown area. To more efficiently allocate such land, consideration should be given to limiting on-street parking and to consolidating smaller parking lots into a few large, strategically placed facilities. This limitation could allow significant reduction in street acquisition and improvement costs on new streets without curtailing regular traffic flows and an existing street such as Texas Street would create space for needed pedestrian amenities

Often, when it is warranted in planned unit developments (PUD), some or all off-street parking and sidewalks can be eliminated. The savings resulting from such action can be used to offset the costs of internal pedestrian path and linear park systems and work to lessen the growing intrusion of the automobile into residential areas.

## STREET APPEARANCE

For most people, streets and highways themselves are unattractive. They derive their interest and beauty from the surrounding land and its scenery, whether it is urban or rural. It becomes important then to emphasize rather than to avoid detracting from the appearance of these surroundings.

The elimination of roadside signs, billboards and other types of commercial advertising can have tremendous effect on the improvement of such scenery. In many areas, signs may often totally obscure the off-road landscape. The night time glare from lighted signs in commercial areas can clearly be a danger to the weary driver.

Within the planning area certain roads have been designated as scenic roadways as defined in the Scenic Roadways Element. Where this designation exists controls are applied on structural development and commercial advertising to preserve and enhance the off-road landscape.

The designated scenic roadways include I-80, I-680 and portions of Highway 12, Green Valley Road, Rockville Road, Suisun Valley Road, Mankas Corner Road and Oliver Road.

## NEW STREET STANDARDS

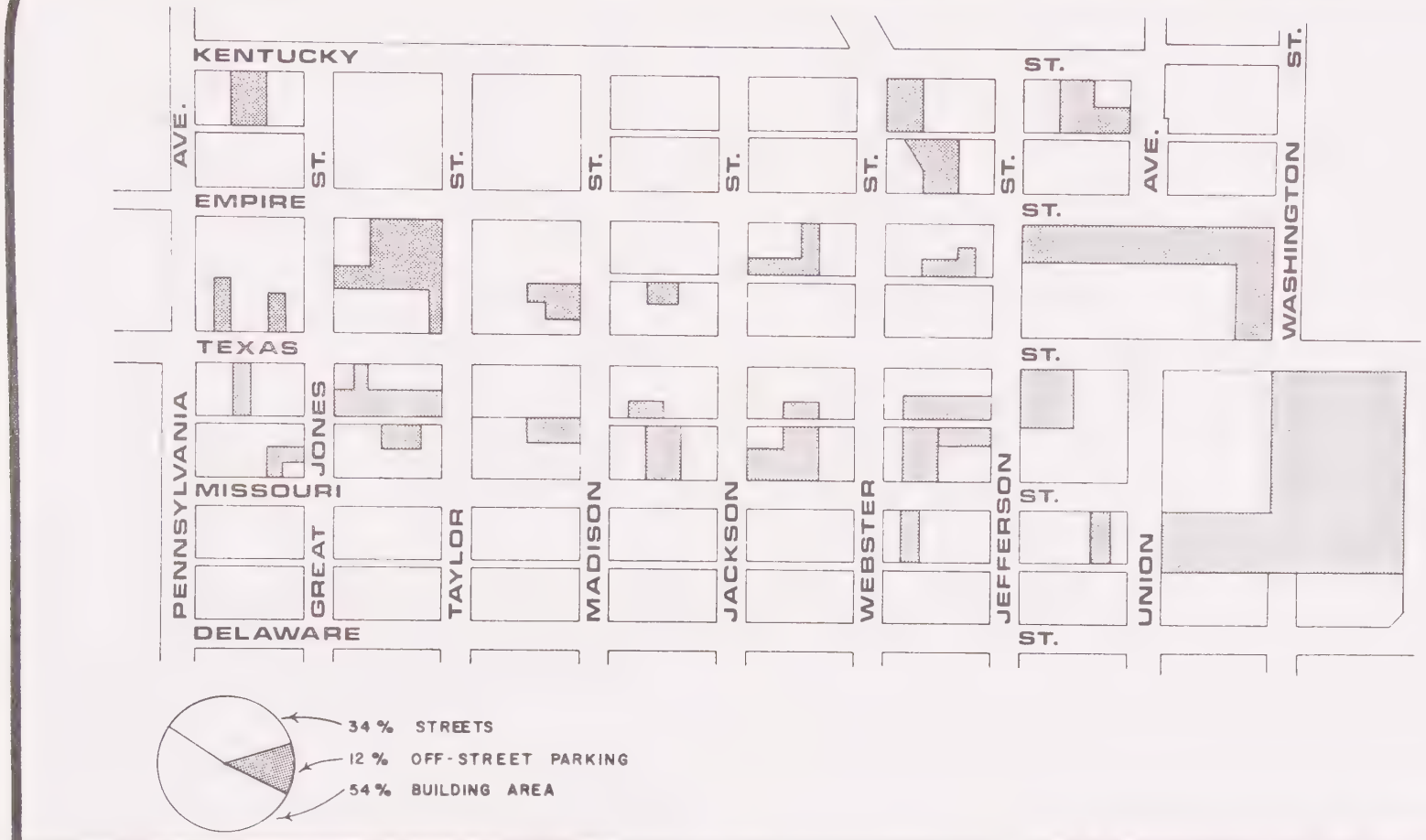
It is recommended that the City develop new street standards that will include narrower sections for both minor and collector streets. Reducing street widths can save energy and money. Conservative estimates for example show that narrower streets can save more than 15 dollars per month per home in energy costs and are safer for pedestrians and bicyclists.[1]

Narrower street widths should be permitted when it can be shown that the traffic on minor and collector streets would not exceed 500 and 5,000 ADT respectively. Under these conditions the width of pavement between curbs as indicated in Table 1 can be reduced by the elimination of parking lanes from one or both sides. Finally, where traffic is light, consideration should be given to the elimination of sidewalks from one or both sides of the street.

## TRANSIT DEVELOPMENT

The City of Fairfield has recently developed programs to provide local public transit facilities. The reasons for this action are many. There are, for example, substantial numbers of local residents who cannot avail themselves of the private automobile.

[1] The Cordelia Village Development-Energy Considerations
Landshaft Environmental Consultants September 10, 1976




CITY OF FAIRFIELD GENERAL PLAN——TRANSPORTATION ELEMENT

**Off-Street Parking Fairfield CBD**

NORTH

0 400 FEET

SCALE

OFF-STREET PARKING AREA

**Figure 4**

Included in this category would be 3,200 elderly persons, 60 years and over, who comprise 6% of the local population. There are also about 2,500 non elderly handicapped persons in Fairfield. While not all persons in these categories have transportation related difficulties a substantial number are limited in their accessibility to private automobile, taxis and conventional transit vehicles.

In addition, there are other persons who lack convenient access to the private automobile including households lacking an automobile and persons too young to posses a driver's license.

The preservation of our environment must also be taken into account when determining the need for alternatives to the automobile. As previously stated, 57 percent of the air pollution in Central Solano County is now the direct result of motor vehicle emmissions.

The City's Transit Development Program, adopted by the City Council in 1978, calls for the implementation of a system that combines both a demand responsive system and a fixed route transit service. A fixed route service would be developed gradually over a five year period with careful monitoring to insure that the system is serving the community's needs and is operating cost-effectively. At the same time, demand responsive services such as the taxi operation and Fairfield's Dial A Ride Transit (DART) would be enhanced even as a portion of the DART partronage is diverted to the shared ride taxi-cab service. Improvements would include the provision of 24-hour service for elderly and handicapped persons; extending hours of service for the general public by the use of shared ride taxi-cab service; and improving the level of DART service.

Fares on the DART system would be increased to recover a greater share of the cost of operation, and service would continue to be improved to attract more riders away from the automobile. The target of the program is to develop a full-coverage fixed route system, with a quality demand responsive system for the Fairfield urban growth center.

As development occurs within the Cordelia growth center it will be necessary to extend public transportation to that area. Three alternatives aimed at providing transit in the Cordelia area are discussed below:

(1) Cordelia Shuttle: This system would provide a fixed route shuttle system linking Cordelia and Fairfield. The shuttle would be routed through Cordelia as future circulation patterns develop.

(2) Cordelia Dial-A-Ride: This system would, as warranted by new residential growth in the area, develop a taxi-based dial-a-ride service operating within the Cordelia area. This system would be similar to the existing DART system.

(3) Cordelia Fixed Route: This system would provide a fixed route within Cordelia in addition to the Cordelia-Fairfield shuttle. The system would operate similarly to the Fairfield fixed route system.

A third area of public transit need is the City's coordination with Countywide transit service. The Draft Solano County Transportation Plan proposes the implementation of several county wide transit proposals which require coordinating with Fairfield. These proposals include the provision of transit for inter-county trips, implementation of ride sharing programs, satellite parking and the establishment of freeway transportation centers.

## MEETING THE NEEDS OF THE PEDESTRIAN

Pedestrian traffic today is largely confined to children; to adults walking for pleasure; and as secondary means of movement in conjunction with a motor vehicle. As long as trends encourage the decentralization of urban growth, walking cannot be expected to regain a position as a major form of transportation, it can, however, be encouraged as a healthful, pleasurable activity, and be developed as an important intra-neighborhood travel mode.

Neighborhood design and local availability of certain goods and services does much for the promotion of pedestrian travel. Beyond this, good design in pedestrian ways, walks, paths, etc., which consider common human characteristics appear to be indicated.

People feel intimidated, for example, by close proximity to fast moving cars and trucks and do not enjoy being exposed to them. The human being naturally moves through the environment at about three to four miles per hour, perhaps at one tenth the rate of automotive traffic.

Loud noise from vehicular traffic, aircraft, industry and commercial activity are unpleasant to the pedestrian. The oil, dirt, noise, exhaust, glare and masses of parked cars creates, for many individuals, an alien and inhuman atmosphere.

Extreme weather. The heat of the summer months, the cold, rain and fog in the winter season and the ever present local wind are enough to encourage even the hardiest pedestrian to seek the shelter of his car if one is available.

Many people fear attack at night on isolated streets.

High curbs and motor vehicles that obstruct sidewalks make it difficult to use grocery carts and baby buggies and, in particular, serve as obstacles to the blind and other physically handicapped persons.

To offset such problems and encourage local pedestrian circulation, this element recommends that the following design techniques be incorporated into the design of local circulation systems:

(1) Separation of vehicles and pedestrians, through the use of plantings, by berming or by routing paths and sidewalks away from their normal position adjacent and parallel to roadways (interior walkways in P.U.D.'s is an excellent example of the latter);

(2) Introduction of ordinances to control noise producers;

(3) Planting of shade trees along City streets and sidewalks to protect pedestrians from the summer heat. Certain kinds of trees can also afford winter protection from rain and wind. In the downtown area, the use of store front awnings or other appropriate coverings should be provided for pedestrians. Protective coverings at bus stops might also encourage transit ridership in times of inclement weather.

(4) Interesting vistas to be provided along pedestrian ways. These might include views of urban or natural scenes; unique architecture: landscaping, parks, playgrounds, etc.

(5) Well-traveled sidewalks and other pedestrian ways to be made safer through the use of better lighting at night. Frequent police patrols along with increased pedestrian traffic also discourages would-be assailants.

(6) The City should act to enforce municipal regulations that prohibit vehicles and other objects from obstructing sidewalks and other public pedestrian ways.

(7) Of special concern is the need for the City to survey existing street patterns with the objective of deliberately routing through traffic to certain streets and discouraging it on others to provide a better, safer pedestrian environment. This need is particularly evident in the Fairfield Central Business District and in City and County government center areas.

(8) During periods of construction that involve work in the public right-of-way special consideration should be given to insure that pedestrians have a safe travel path through the construction.

## PEDESTRIAN CIRCULATION IN THE CBD

A plan recently developed for Fairfield's CBD states that pedestrian circulation would be enhanced greatly through mall development, provision of midblock openings and crossings, reduction of speed limits, and the conversion of certain alley sections to favor the pedestrian. In general it is proposed that the existing 14' sidewalk cross-sections on Texas Street be retained for ease of pedestrian flow and for the accommodation of street furniture.

Semi-mall sections would be designed for a variety of activities as well as for the convenience of the pedestrian within the retail core. In addition to places to rest and congregate, semi-mall areas should magnify opportunities for business promotion and public activities in support of the objective that the CBD regain its place as the focal point of local community activity.

## THE BICYCLE TRAIL SYSTEM

The central Solano County Planning Area, like so many other areas, is experiencing a significant growth in the number of bicycle owners. This trend, expected to continue, is providing many citizens with an excellent alternative to the automobile for local transportation needs.

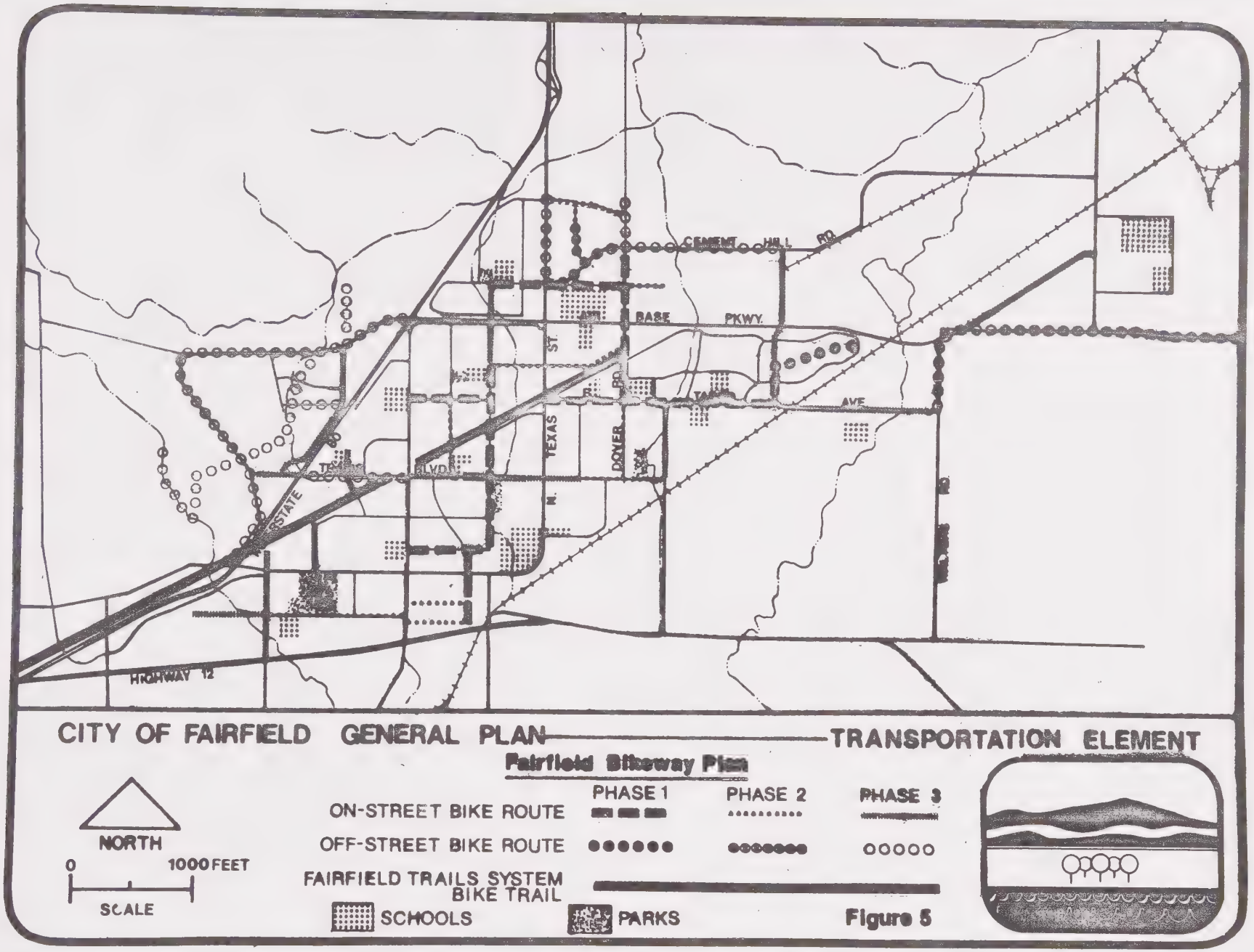
Although elementary school children have traditionally been the bike riders in a community, all population groupings including high school and college students as well as older citizens now ride bicycles.

A draft Bikeway Plan has been prepared by an Ad Hoc Bicycle Coordinating Committee, established by the Fairfield City Council (See Figure No. 5).

The goals of the draft Fairfield Bikeway Plan are instructive:

(a) To provide a bicycle transportation network throughout the City of Fairfield;

(b) To provide the opportunity for safe, convenient and pleasant bicycle travel throughout all areas of Fairfield;


CEMENT HILL RD.
BASE PKWY.
ST.
RD.
AVE.
TEXAS
DOYER
N.
HIGHWAY 12
CITY OF FAIRFIELD GENERAL PLAN
TRANSPORTATION ELEMENT
Fairfield Bikeway Plan
PHASE 1
PHASE 2
PHASE 3
ON-STREET BIKE ROUTE
OFF-STREET BIKE ROUTE
FAIRFIELD TRAILS SYSTEM BIKE TRAIL
SCHOOLS
PARKS
NORTH
0
1000 FEET
SCALE
Figure 5

(c) To encourage the use of bicycles as a pleasant means of travel and recreation embodying physical, environmental, and social benefits.

(d) To encourage coordination and development of City bike routes to connect with future County bike routes.

The bike system recommended by the draft is a three-phase program. Phase I consists of bike lanes on about six miles of local collector and arterial streets. The bike routes in Phase II are extension of the routes of Phase I, and will provide links with additional activity centers and neighborhoods. Phase II will consisit of bike lanes on about 4.25 miles of street. The bike routes in Phase III are to be located mainly in areas of future development in the Fairfield and Cordelia areas. Phase III implementation is to occur as the areas develop and/or funding becomes available. Phase III will consist of about 8.4 miles of on-street bike lanes and 10.9 miles of off-street bike trails.

This plan strongly recommends that the draft Fairfield Bikeway Plan be adopted as a part of the Transportation and Circulation Element of the General Plan.

In designing circulation patterns for the continued and growing use of bicycles, there are several factors that should be considered:

(1) Bicycles are not compatible with fast-moving, motor-driven traffic found on major collector and arterial streets.

(2) Bicycles are not compatible with pedestrians on City sidewalks and in crowded public areas where many people are walking.

(3) Bicycle riding will decline in periods of bad weather.

(4) Theft is a major concern of bicycle owners and riders.

The problems raised by such factors can be alleviated through good design techniques. The cities of Davis and Berkeley, and to a lesser extent, Fairfield, provide good examples of functioning bicycle path circulation systems that serve as integral parts of local transportation systems. Most of the routes have been incorporated into existing street patterns in which either a moving or a parking lane has been given over to bicycles. Where the traffic situation permits it, and where streets are wide enough, this method normally requires little more than painting of the street to mark bicycle lanes.

## INCENTIVES AND DISINCENTIVES TO ALTER TRIP MAKING

### Automobile Costs

Aside from the initial cost involved in purchasing an automobile, the individual often fails to realize the amounts required to own and operate his vehicle. The purchase price is only the first step in a long line of costs that must be paid in moving and maintaining the car during its approximate 100,000 mile, 10-year trip from the assembly line to the junkyard. In a study conducted by the U.S. Federal Highway Administration, it was pointed out that the owner of a standard size car in 1974, will pay $3,026 for gasoline over the 10-year period. During this period he will pay $2,940 to keep the vehicle maintained and in repair, $1,618 to insure it, and $1,960 for garaging, $1,960 for parking and tolls.

His State and Federal automotive tax bill, most of which goes to support the roads he drives on, will amount to $1,509 - about 9.5 percent of total costs. Thus, the advantages of owning and operating a private auto may, in the long run, be far out-weighed by the overall economic costs; in addition to the hazards and tensions involved in everyday driving.

Regional Program

In order to alter the traditional travel behavior of individuals in a manner that helps to eliminate transportation problems several region-wide programs have been proposed. These programs include the following:

(1) Increase automobile tolls on all bridges.

(2) Implement a regional parking strategy to discourage private auto use and encourage high occupancy auto use. This strategy would include preferential parking for carpools and vanpools.

(3) Provide additional transit service.

(4) Develop high occupancy vehicle lanes and/or ramp metering.

(5) Provide more ride sharing services such as jitneys and vanpools.

(6) Develop more extensive bicycle systems.

It is recommended that a local program to assist in the implementation of the regional trip altering program be instituted.

Such a program should incorporate the following features:

Local Programs

(1) Develop an overall parking strategy for the urban portions of the planning area. Special emphasis should be given to retail and office centers with consideration given to preferential parking for carpools/vanpools and credits for inclusion of transit amenities.

(2) Employers should actively assist employees to develop and operate vanpools and carpools.

(3) Reimbursement of transit costs to shoppers and employees should be considered by local merchants. Many commercial establishments presently encourage auto usage through provision of a free or validated parking system for customers and employees. The same encouragement to use public transit could be achieved through a program of direct subsidy to operators of transit services to commercial or employment centers. This would be through direct reimbursement or credit for transit fares; and through payroll additives for non-use of automobiles by employees.

(4) A no-fare transit system should be studied to determine its feasibility. The study should determine whether low or no-fare transit will induce drivers to leave the private auto and also provide help to transit dependent persons and to what extent resultant benefits (as well as equity benefits) would offset the large public subsidy required.

(5) Driver education classes in high schools should include instruction in the use and benefit of public transit systems and also about the real costs - personal and social - involved in auto ownership and use.

(6) The physical appeal of transit vehicles should be emphasized through the implementation of new, more luxurious and efficient design standards for transit vehicles and facilities.

## FINANCING ALTERNATIVE TRANSPORTATION SYSTEMS

Before we can begin to establish a network of alternative transportation systems in the Planning Area, funding must be acquired to support such a system. Until recently, little money had been spent locally on modes of transportation other than the private automobile. State-allocated funds have traditionally been used solely to finance the construction and maintenance of roadways in the Planning Area.

There are several alternatives for financing a City-owned and operated, nonprofit public transit system.

A major source of funding for such a system is the California Transportation Development Act (TDA), popularly known as SB 325. The City of Fairfield receives an excess of $450,000 per year in SB 325 funds, and this money is available to cover both the operating and capital needs of public transit. The City of Fairfield is presently using its TDA money for both public transportation and streets and highways, as shown in Table No. 2.

The prime source of federal funds is from the Urban Mass Transportation Administration (UMTA). Money for acquisition of capital equipment is available from UMTA, and is available on a 80/20 federal-local basis. Operating assistance from this source is available to some cities having certain population numbers.

Although the City of Fairfield is not presently eligible for this money, it is anticipated that the City will meet population eligibility requirements after the 1980 census.

Other methods of finance include:

Contracts with industries and merchants to help assume the costs of the public transportation system if it serves their operations; contracts with developers which assign a part of the funds otherwise required for major arterial and collector street construction during the development process to the transit system; and the assignment of a portion of the property tax derived from commercial and industrial operations served by the transit system; and finally, bicycle trails and pedestrian paths can be funded through Land and Water Conservation Grants, or financed as regular subdivision improvements with maintenance costs paid by the homeowners using them. Finally, the City should not overlook civic, service and social organizations in the community for contributions to finance circulation system landscape improvements in the Planning Area.

TABLE 2

LOCAL TRANSPORTATION ACTUAL REVENUES AND EXPENDITURES

| REVENUES | 1971-1972 | 1972-1973 | 1973-1974 | 1974-1975 |
|---|---|---|---|---|
| Transportation Topics | 104,966 | 30,194 | 30,968 | |
| State Gasoline Taxes | 391,484 | 408,893 | 401,826 | 423,003 |
| Transport. Devel. Act | | 150,000 | 199,000 | 264,430 |
| General Fund | 545,999 | 262,440 | 651,129 | 773,486 |
| Revenue Sharing | | | 21,026 | |
| Traffic Safety Fund | | | | |
| Construct. License Tax | | | | |
| F A U Grant | | | | |
| TOTAL REVENUES | 1,042,449 | 851,527 | 1,303,949 | 1,460,919 |
| EXPENDITURES | | | | |
| Traffic Signals | 67,020 | 192,145 | 45,443 | 71,758 |
| Street Maintenance | 627,635 | 574,633 | 756,747 | 993,253 |
| New Construction | 163,370 | 102,283 | | 139,567 |
| Public Transportation | | | | 13,353 |
| Bicycle Trails | | | | |
| TOTAL EXPENDITURES | 858,025 | 869,061 | 802,190 | 1,217,931 |

| REVENUES | 1975-1976 | 1976-1977 | **1977-1978 | TOTALS |
|---|---|---|---|---|
| Transportation Topics | | | | 166,128 |
| State Gasoline Taxes | 434,765 | 457,197 | 549,490 | 3,066,658 |
| Transport. Devel. Act | 262,601 | 293,500 | 372,510 | 1,542,041 |
| General Fund | 1,065,027 | | | 3,298,081 |
| Revenue Sharing | | 47,203 | | 68,229 |
| Traffic Safety Fund | 61,675 | 31,309 | 22,000 | 114,984 |
| Construct. License Tax | | | 300,000 | 300,000 |
| F A U Grant | | 204,478 | 195,000 | 399,478 |
| TOTAL REVENUES | 1,824,068 | 1,033,687 | 1,439,000 | 8,955,599 |
| EXPENDITURES | | | | |
| Traffic Signals | 87,749 | 22,861 | 46,200 | 533,176 |
| Street Maintenance | 1,052,250 | 276,079 | 271,000 | 4,497,597 |
| New Construction | 55,695 | 341,108 | 804,425 | 1,606,448 |
| Public Transportation | 162,891 | 230,893 | 212,400 | 619,537 |
| Bicycle Trails | 33,523 | 35,500 | | 69,023 |
| TOTAL EXPENDITURES | 1,392,108 | 906,441 | 1,280,025 | 7,325,781 |

* Includes Investment Earnings
** Revenue Estimates and Appropriations only

SOURCE: City of Fairfield Finance Department

# SECTION 4. CONCLUSION AND POLICIES

## CONCLUSION

The transportation and circulation system as it now exists in Central Solano County is almost totally oriented towards the private automobile. Even though this mode of transport is deemed the most convenient to the user, its impact on our urban environment has been devastating. Miles of roads and freeways, for example, have been built across prime agricultural lands. As improvements were added to expand the roadway system, more motorists were enticed to use these facilities. As a result, many of our freeways are no longer efficient as they become congested with commuters during peak traffic hours. Noise, air pollution, and fuel shortages are also reaching critical levels as a direct result of our automobile conscious society. It is obvious, however, that while these trends have been developing, this does not have to be our ultimate destiny.

A dramatic change in public policy making is the first step that must be undertaken if there is to be any changes in our present transportation system. Incentives and disincentives must be introduced that have a definite impact in altering the public's attitude regarding the automobile and public transit use. Long-range land use planning must be enacted and enforced to control low density urban sprawl which forces the resident to utilize the automobile to work and shop. New modes of transportation must be developed and incorporated into the planning area transportation system.

Bicycle trails and pedestrian paths should also be of a high priority nature in future planning. The end result would be a comprehensive transportation plan for the planning area, making all portions of it accessible to the community.

Finally, the dissemination of information about the transportation plan is of great importance. Local government and the media can be used to inform the individual citizen. Numerous organizations with specialized transportation interests should be kept informed and should be encouraged to participate in public planning for particular kinds of facilities and activities.

## POTENTIAL IMPACTS SUMMARY

The following major category of impact would occur as a result of General Plan implementation:

1) By the year 2000, projected traffic increases would result in a deterioration of service levels on I-80 a well as on critical arterials and intersections in Fairfield.

2) Proposed roadway modifications in conjunction with projected traffic increases would result in congestion and insufficient capacity at all I-80 interchanges in the planning area.

3) Air quality in the planning area is expected to improve in the future, assuming CO and hydrocarbon exhaust emission rates are reduced according to EPA projections. However, air quality standards could continue to be exceeded in the future in areas of congestion and along I-80 under adverse meteorological conditions.

## TRANSPORTATION AND CIRCULATION POLICIES

In addition to the specific recommendations noted in the preceding sections, policies which are to provide guidance for transportation and circulation proposals of the Plan and mitigate adverse environmental impacts which may result are as follows:

## STREET DEVELOPMENT STANDARDS

(1) To avoid unacceptable levels of traffic congestion the City shall, at the earliest time, prepare a list of improvement priorities to the local road circulation system as it exists in the developed areas of Fairfield.

(2) Local City and County policies should be consistent with respect to standards for the ultimate design and construction of streets within urban areas.

(3) The timing and staging of improvements to the system of streets described in the General Plan should be coordinated closely by the local cities and County to maximize the extent to which components of the system will perform more fully their functions as defined in the General Plan.

(4) Where frontage roads are not provided, residential subdivisions along arterial streets should be required to back onto such arterials, including the waiver of access rights and provision for screen fencing and landscaping between controlled points of access to arterials.

(5) Residental development should be discouraged along freeway rights-of-way, except where adequate provision is made for spatial separation and landscaping to assure that noise levels generated by freeway traffic will fall with- in standards of noise control provided by policies and proposals of the Noise Element of the General Plan.

(6) Access points to adjoining properties along arterials should be controlled as to spacing to assure the free flow of traffic on the arterial.

(7) Frontage roads may be along arterials to serve adjacent commercial, residential, industrial and major institutional use areas to protect the traffic carrying capacity and safety at the arterials.

(8) Design standards which are applied to arterial and collector streets shall permit innovation and flexibility by the developer in relation to land use proposals, while assuring that traffic functions are protected.

(9) The ultimate right-of-way required for arterial streets should be acquired during early stages of growth center development; where traffic generated by initial increments of development is not likely to warrant full cross-sectional development for several years, the developer shall he permitted to expand the street in stages, provided that adequate provision is made through bonding or letter of credit to assure ultimate development.

(10) Design standards applied to arterial and collector streets shall be based on projections of traffic volume and flow provided by the developer and verified by the City.

(11) All intersections of arterials and of arterials and collector streets shall be channelized, with double left turns and right turn islands installed as warranted.

(12) New arterial streets shall include off-street bicycle paths and new collector streets shall include on-street bicycle lanes.

(13) Efforts should be made by the City of Fairfield, particularly in the Fairfield Central Business District, to route and control local and through vehicular traffic in such a manner that pedestrians are assured safer and more convenient environment.

(14) Transportation system improvements, such as construction of new arterial roads or expansion of existing roads, should only be undertaken when their need has been clearly demonstrated through appropriate traffic projections. The aim should be to accommodate planned growth rather than provide excess capacity which may be growth-inducing.

(15) The City shall make every effort to maintain public sidewalks and walk ways clear of all obstructions including parked automotive vehicles to insure safe passage for all persons and particularly the elderly, the blind, the infirm, and persons confined to wheelchairs.

## ALTERNATIVE MODES

(1) Recreation corridors shall be provided as a spatial separation between residential development and freeway rights-of-way to assist in modulating noise levels generated by freeway traffic within standards of noise control provided under the Noise Element of the General Plan.

(2) All transportation proposals and services should take special account of problems faced by children, the handicapped, the elderly and the poor.

(3) Optional means of ground transportation (other than the automobile) should be provided as part of the local transportation system both within and between the Cordelia and Fairfield growth centers, including public transit.

(4) The General Plan should provide for future options for the extension of high speed ground transportation between the San Francisco Bay Area and the Sacramento metropolitan area, or between the Bay Area and Travis Air Force Base, in the event that Travis assumes an important role in interregional and transcontinental commercial air passenger or air freight service.

(5) A multi-model transportation system should be instituted to make available a wider range of choice and satisfy a larger number of transportation needs.

(6) The cities should investigate and promote transportation modes which foster fuel conservation.

(7) Transportation systems will be designed and promoted to reduce the overdependence on the automobile as a transportation mode.

(8) Wherever possible, provisions for transit stops should be incorporated into the project design of future residential areas.

(9) Future residential developments in Fairfield should be required to incorporate bike trails into project designs. The trails should be included in the Fairfield Bikeway Plan, and, wherever possible, offstreet bike routes should be designed to minimize safety hazards.

(10) Preferential parking should be given to carpools and vanpools in the downtown area and near local industries.

(11) To reduce traffic levels and congestion in the downtwon area, a transit development plan should be designed and implemented to encourage motorists to use the transit system.

(12) Local disincentive programs which would encourage shoppers to use transit facilities should be implemented. These would include (a) reimbursement or credit of transit costs: (b) a no-fare/reduced rate transit; (c) rider education classes for students; and (d) more luxurious and efficient design standards for transit vehicles and facilities.

(13) Pedestrian circulation should be encouraged as an alternative to automobile use by designing walkways away from roadways in future residential areas, planting shade trees along sidewalks, improving lighting on well travelled sidewalks, incorporating views of urban or natural scenes, and discouraging traffic on some roadways to improve the pedestrian environment.

(14) The City should implement the Fairfield Bikeway Plan to help reduce auto traffic on local roadways as well as encourage bicycle use.

## AIRPORT PLANNING

(1) Travis Air Force Base represents a valuable aviation resource to the County and the Bar Area. Planning necessary to preserve its future availability as an airport needs to be undertaken.

(2) The County should continue to keep in effect its joint use agreement with the Air Force.

(3) At the appropriate time to be determined in the preliminary planning process, a staff promotional program to determine the interest of air carrier should be initiated.

(4) At the appropriate time, a specific plan should be developed to produce more definite land use patterns in the vicinity of the Base.

## AREA WIDE CONSIDERATIONS

(1) The City should support development of an efficient inter-regional transit system between San Francisco and Sacramento to reduce traffic on I-80 and reduce the roadway's potential air quality impacts on the planning area.

(2) The I-80 corridor should be considered as a logical location for a high-speed mass transit system. This system may include exclusive bus service, rail service, an expansion of Bart or high speed ground transportation.